

CLAIMS

What is claimed is:

1. A copy-resistant security sheet, comprising:
 - 5 a substrate;
 - a light reflective layer disposed over the substrate; and
 - a light diffusive layer disposed over at least a portion of the reflective layer, the diffusive layer having a diffusive background pattern segmenting the reflective layer into a reflective background pattern comprising a plurality of visibly discernible reflective elements.
- 10 2. The security sheet of claim 1, wherein the substrate is composed of paper.
3. The security sheet of claim 1, wherein the reflective layer is composed of metal.
- 15 4. The security sheet of claim 1, wherein the reflective layer exhibits a reflectance of at least eighty percent.
5. The security sheet of claim 1, wherein the reflective layer is non-black.
6. The security sheet of claim 1, wherein the reflective layer is disposed over the entirety of the substrate.
- 20 7. The security sheet of claim 1, wherein the reflective elements are rectilinear.
8. The security sheet of claim 1, wherein the reflective elements are curvilinear.

9. The security sheet of claim 1, wherein the diffusive background pattern is non-black.

10. The security sheet of claim 1, wherein the diffusive background pattern is white.

5 11. The security sheet of claim 1, wherein each diffusive background element is composed of a plurality of nano-characters.

12. The security sheet of claim 1, further comprising a plurality of nano-characters disposed over the reflective and diffusive layers.

10 13. The security sheet of claim 1, further comprising a plurality of nano-characters forming a hidden message.

14. The security sheet of claim 1, wherein the reflective elements have at least a 6 point font size.

15 15. A copy-resistant document, comprising:
a substrate;
a light reflective layer disposed over the substrate;
a light diffusive layer disposed over at least a portion of the reflective layer, the diffusive layer having a diffusive background pattern segmenting the reflective layer into a reflective background pattern comprising a plurality of visibly discernible reflective elements; and
20 bearer information overprinted on the reflective and diffusive layers, wherein the reflective elements interfere with the bearer information on a copy of the document, thereby rendering the bearer information unreadable on the document copy.

25 16. The document of claim 15, wherein the bearer information comprises alphanumerical characters.

17. The document of claim 16, wherein the alphanumerical characters and the reflective elements have a substantially similar font size.

18. The document of claim 15, wherein the bearer information is black, and the diffusive background pattern is non-black.

5 19. The document of claim 18, wherein the diffusive background pattern is white.

20. A copy-resistant security sheet, comprising:
a substrate;
a light reflective layer disposed over the substrate; and
10 a light diffusive layer disposed over at least a portion of the reflective layer, the diffusive layer having a non-black diffusive background pattern segmenting the reflective layer into a reflective background pattern comprising a plurality of reflective elements.

21. The security sheet of claim 20, wherein the substrate is composed of
15 paper.

22. The security sheet of claim 20, wherein the reflective layer is composed of metal.

23. The security sheet of claim 20, wherein the reflective layer exhibits a reflectance of at least eighty percent.

20 24. The security sheet of claim 20, wherein the reflective layer is non-black.

25. The security sheet of claim 20, wherein the reflective layer is disposed over the entirety of the substrate.

26. The security sheet of claim 20, wherein the reflective elements are
25 rectilinear.

27. The security sheet of claim 20, wherein the reflective elements are curvilinear.

28. The security sheet of claim 20, wherein the diffusive background pattern is white.

5 29. The security sheet of claim 20, wherein the diffusive background pattern is composed of a plurality of nano-characters.

30. The security sheet of claim 20, further comprising a plurality of nano-characters disposed over the diffusive background pattern.

10 31. The security sheet of claim 20, further comprising a plurality of nano-characters forming a hidden message.

32. The security sheet of claim 20, wherein the reflective elements have at least a 6 point font size.

15 33. A copy-resistant document, comprising:
a substrate;
a light reflective layer disposed over the substrate;
a light diffusive layer disposed over at least a portion of the reflective layer,
the diffusive layer having a non-black diffusive background pattern segmenting the
reflective layer into a reflective background pattern comprising a plurality of reflective
elements; and
20 bearer information overprinted over the reflective and diffusive layers, wherein
the reflective elements interfere with the bearer information on a copy of the
document, thereby rendering the bearer information unreadable on the document
copy.

25 34. The document of claim 33, wherein the bearer information comprises
alphanumerical characters.

35. The document of claim 34, wherein the alphanumerical characters and the reflective elements have a substantially similar font size.
36. The document of claim 33, wherein the bearer information is black.
37. The document of claim 36, wherein the diffusive background pattern is
5 white.